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LEXDEN & WINSTREE RURAL DISTRICT COUNCIL

WEST MERSEA URBAN DISTRICT COUNCIL

WIVENHOE URBAN DISTRICT COUNCIL

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ANNUAL REPORT

of the

MEDICAL OFFICER OF HEALTH

1945

Rebow Chambers,  
Sir Isaac's Walk,  
Colchester.

3rd July, 1946.

Mr. Chairman, Ladies & Gentlemen,

I have the honour to present my report for the Rural District of Lexden & Winstree and the Urban Districts of West Mersea and Wivenhoe for the year 1945.

As in the previous year, this is a short composite report prepared according to instructions contained in Circulars of the Ministry of Health.

Full detailed statistics have been prepared for future use at a time to be stated by the Ministry of Health.

I have the honour to be  
Your obedient Servant,

W.H. ALDERTON.

Medical Officer of Health.

## ANNUAL REPORT 1945.

The Character of the three Districts has remained substantially the same in the year under review.

### STAFF.

The staffing arrangements improved considerably during the year with the return of Sanitary Inspectors from the Forces. West Mersea and Wivenhoe Urban Districts are once more served by their usual whole-time Inspectors; Lexden & Winstree staff was augmented by the return from the Forces of their two Sanitary Inspectors and the Chief Clerk in the Public Health Department.

### VITAL STATISTICS.

The birth rate, death rate and infant mortality rates for the three districts are shown in the table below; as no factor for the correction of the death rates has been supplied, only the crude death rate can be shown; the death rates between districts and the whole country cannot, therefore, be compared.

District	Birth Rate per 1,000 population.	Death Rate per 1,000 population.	Infant Mortality. (Deaths of infants under 1 year per 1,000 live births).
Lexden & Winstree	16.6	13.1	27.3
West Mersea	24.0	17.1	19.2
Wivenhoe	18.9	15.7	58.8
England & Wales	16.1	13.5	46.0

### DIPHTHERIA IMMUNISATION.

The campaign for the protection of children against Diphtheria has continued energetically throughout the year. No opportunity is lost of persuading parents to accept immunisation for their children and convenience of the parents is studied so that there can be no excuse of lack of opportunity of protection. In addition to facilities available at clinics, special and standing, parents may take their children to their own doctor or have visits made to their own homes.

The following table shows the percentages of children in certain age groups, immunised on 31st December, 1945:-

District	Percentage immunised 0 - 4 yrs. inclusive	Percentage immunised 5 - 14 years inclusive
Lexden & Winstree	61.3	83.5
West Mersea	70.7	78.0
Wivenhoe	81.1	71.4

## WATER SUPPLIES.

West Mersea is supplied by the Council's undertaking from a deep bore into the chalk, it is sufficient in quantity and satisfactory in quality; chlorination is carried out before delivery to the mains. Two complete analysis and one bacteriological analysis have been carried out, each being satisfactory. Below is an analysis of the raw water:-

CHEMICAL RESULTS IN PARTS PER 100,000.

Appearance: Very faint opalescence - slight deposit of mineral debris sand. Turbidity: 5 parts per million. Silica Scale

Colour: Normal.

Odour: Nil.

Reaction pH: On the alkaline side  
of neutrality: 8.2.

Free Carbonic Acid: 0.3.

Electric Conductivity at 20°C: 3200. Total Solids, dried at 180°C: 213.

Chlorine in Chlorides: 78.0. Alkalinity as Calcium Carbonate: 39.5.

Hardness: Total: 7.0. Temporary: 7.0. Permanent: 0.0.

Nitrogen in Nitrates: 0.00. Nitrogen in Nitrites: Absent.

Free Ammonia: 0.11.      Ammoniacal Nitrogen: -

Albuminoid Ammonia: 0.0000. Albuminoid Nitrogen: -

Oxygen Absorbed in 4 hrs. at 27°C: 0.035.

Metals: Iron: Less than 0.003. Other metals absent.

'Free chlorine reaction' Absent.

## BACTERIOLOGICAL RESULTS.

Number of "Bacteria" growing } 1 day at 37°C.      2 days at 37°C.  
on Agar per cc. or ml. in.      0.      0.

3 days at 20°C.

Presumptive Coliform Reaction: Present - Absent 100 c.c.

Bact. coli: Present - Absent 100 c.c.

Cl. welchii Reaction: Present - Absent

The number of dwelling houses connected to the mains is 772, with a population of approximately 1,620.

The number of dwelling houses supplied by means of standpipes is 33, with a population of approximately 70.

Wivenhoe is supplied in the same manner and chlorination is carried out at the pumping station. The quantity and quality is satisfactory.

Two complete analyses and nine bacteriological analyses were carried out; all except one bacteriological analysis was satisfactory; this one showed an unusual number of colonies of a non-excremental character growing in the warm incubator. On checking up, it was decided that this sample was faultily taken. Appended is a characteristic complete analysis of the water:-

#### CHEMICAL RESULTS IN PARTS PER 100,000.

Appearance: Bright with very slight deposit of mineral debris,  
Turbidity: Less than 5 parts per million, Silica Scale.  
Colour: Normal. Odour: Nil.  
Reaction pH: On the alkaline side  
of neutrality: 7.7. Free Carbonic Acid: 0.9.  
Electric Conductivity at 20°C: 1850. Total Solids, dried at  
180°C: 123.5.  
Chlorine in Chlorides: 42.0. Alkalinity as Calcium Carbonate: 30.0.  
Hardness: Total: 12.0. Temporary: 12.0. Permanent: 0.0.  
Nitrogen in Nitrates: 0.00. Nitrogen in Nitrites: Approx. 0.001.  
Free Ammonia: 0.0072. Ammoniacal Nitrogen: -  
Albuminoid Ammonia: 0.0000. Albuminoid Nitrogen: -  
Oxygen absorbed in 4 hrs. at 27°C: 0.060.  
Metals: Iron 0.010. Other metals absent.  
'Free chlorine reaction' Absent.

#### BACTERIOLOGICAL RESULTS.

Number of "Bacteria" growing } 1 day at 37°C. 2 days at 37°C.  
on Agar per cc. or ml. in } 0 0  
3 days at 20°C.

Presumptive Coliform Reaction.	Present	-	Absent	100 c.c.
Bact. coli.	Present	-	Absent	100 c.c.
Cl. welchii Reaction.	Present	-	Absent	-

The number of dwelling houses connected to the mains is 747, with a population of approximately 1,760.

The number of dwelling houses supplied by means of standpipes is 167, with a population of approximately 390.

Lexden & Winstree is supplied by public mains from four undertakings and at East Mersea by a shallow well. The supplies are sufficient and satisfactory, although the shallow well is not of a high bacterial standard. In all 21 complete analyses and nine bacteriological analyses were carried out. One of the bacteriological analyses with a sample taken from a tap on the Abberton supply was unsatisfactory, but a sample taken from the bore two days later was quite satisfactory.

Below are characteristic analyses of the various supplies:-

---ABBERTON---

CHEMICAL RESULTS IN PARTS PER 100,000.

Appearance: Clear and bright.

Colour: Normal. Odour: Nil.

Reaction pH: On the alkaline side  
of neutrality: 7.7. Free Carbonic Acid: 1.0.

Electric Conductivity at 20°C: 2600. Total Solids, dried at  
180°C: 165.0.

Chlorine in Chlorides: 64.0. Alkalinity as Calcium Carbonate: 34.0.

Hardness: Total: 9.0. Temporary: 9.0. Permanent: 0.0.

Nitrogen in Nitrates: 0.12. Nitrogen in Nitrites: Less than 0.001.

Free Ammonia: 0.0008. Ammoniacal Nitrogen: -

Albuminoid Ammonia: 0.0000. Albuminoid Nitrogen: -

Oxygen absorbed in 4 hrs. at 27°C: 0.025.

Metals: Iron: 0.005. Other metals absent.

'Free chlorine reaction' Absent.

BACTERIOLOGICAL RESULTS.

Number of "Bacteria" growing) 1 day at 37°C. 2 days at 37°C.  
on Agar per cc. or ml. in ) 0 0

3 days at 20°C.

Presumptive Coliform Reaction. Present - Absent 100 c.c.

Bact. coli. Present - Absent 100 c.c.

Cl. welchii Reaction. Present - Absent -

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Appearance: Clear and Bright.  
 Colour: Normal. Odour: Nil.  
 Reaction pH: Neutral: 7.4. Free Carbonic Acid: 1.5.  
 Electric Conductivity at 20°C: 950. Total Solids, dried at 180°C: 63.5.  
 Chlorine in Chlorides: 14.0. Alkalinity as Calcium Carbonate: 27.0.  
 Hardness: Total: 15.5. Temporary: 15.5. Permanent: 0.0.  
 Nitrogen in Nitrates: 0.06. Nitrogen in Nitrites: Less than 0.001.  
 Free Ammonia: 0.0000. Ammoniacal Nitrogen: -  
 Albuminoid Ammonia: 0.0000. Albuminoid Nitrogen: -  
 Oxygen absorbed in 4 hrs. at 27°C: 0.005.  
 Metals: Iron: 0.015. Other metals absent.  
 'Free chlorine reaction' Absent.

## BACTERIOLOGICAL RESULTS.

Number of "Bacteria" growing } 1 day at 37°C.      2 days at 37°C.  
on Agar per cc. or ml. in      0      3  
3 days at 20°C.

Presumptive Coliform Reaction.	Present	-	Absent	100 c.c.
Bact. coli.	Present	-	Absent	100 c.c.
Cl. welchii Reaction.	Present	-	Absent	-

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## CHEMICAL RESULTS IN PARTS PER 100,000.

Appearance: Very faint opalescence - very slight flocculent deposit of mineral debris. Turbidity: less than 5 parts per million, Silica Scale.

Colour: Normal. Odour: Nil.  
Reaction pH: Neutral: 7.6. Free Carbonic Acid: 1.3.  
Electric Conductivity at 20°C: 1900. Total Solids, dried at 180°C: 119.0.  
Chlorine in Chlorides: 45.0. Alkalinity as Calcium Carbonate: 35.0.  
Hardness: Total: 14.0. Temporary: 14.0. Permanent: 0.0.  
Nitrogen in Nitrates: 0.00. Nitrogen in Nitrites: Absent.  
Free Ammonia: 0.11. Ammoniacal Nitrogen: -  
Albuminoid Ammonia: 0.0006. Albuminoid Nitrogen: -  
Oxygen absorbed in 4 hrs. at 27°C: 0.040.  
Metals: Iron: 0.020. Other metals absent.  
'Free chlorine reaction' Absent.

## BACTERIOLOGICAL RESULTS.

Number of "Bacteria" growing on Agar per cc. or ml. in

1 day at 37°C.	2 days at 37°C.
0	3
3 days at 20°C.	

Presumptive Coliform Reaction.	Present	-	Absent	100 c.c.
Bact. coli.	Present	-	Absent	100 c.c.
Cl. welchii Reaction.	Present	-	Absent	-

- COLNE AND STOUR VALLEY -

Appearance: Very faint opalescence - slight flocculent deposit of mineral debris - iron oxide. Turbidity: 7 parts per million, Silica Scale.

Colour: Normal.

Odour: Nil.

Reaction pH: Neutral: 7.1.

Free Carbonic Acid: 3.5.

Electric Conductivity at 20°C: 940. Total Solids, dried at 180°C: 63.0.

Chlorine in Chlorides: 14.4. Alkalinity as Calcium Carbonate: 30.5.

Hardness: Total: 32.5. Temporary: 28.5. Permanent: 4.0.

Nitrogen in Nitrates: 0.00. Nitrogen in Nitrites: Absent.

Free Ammonia: 0.034.

Ammoniacal Nitrogen: -

Albuminoid Ammonia: 0.0000.

Albuminoid Nitrogen: -

Oxygen absorbed in 4 hrs. at 27°C: 0.000.

Metals: Total Iron: 0.045. In solution 0.015. Other metals absent.

'Free chlorine reaction' Absent.

BACTERIOLOGICAL RESULTS.

Number of "Bacteria" growing on Agar per cc. or ml. in	}	1 day at 37°C.	2 days at 37°C.
		0	0
		3 days at 20°C.	

Presumptive Coliform Reaction.	Present	-	Absent	100 c.c.
Bact. coli.	Present	-	Absent	100 c.c.
Cl. welchii Reaction.	Present	-	Absent	-

-EAST MERSEA-

CHEMICAL RESULTS IN PARTS PER 100,000.

Appearance: Clear and bright.

Colour: Normal.

Odour: Nil.

Reaction pH: Neutral: 7.1.

Free Carbonic Acid: 2.9.

Electric Conductivity at 20°C: 650. Total Solids, dried at 180°C: 43.5.

Chlorine in Chlorides: 3.0. Alkalinity as Calcium Carbonate: 25.5.

Hardness: Total: 36.0. Temporary: 23.5. Permanent: 12.5.

Nitrogen in Nitrates: 0.16. Nitrogen in Nitrites: Absent.

Free Ammonia: 0.0000.

Ammoniacal Nitrogen: -

Albuminoid Ammonia: 0.0040.

Albuminoid Nitrogen: -

Oxygen absorbed in 4 hrs. at 27°C: 0.050.

Metals: Iron: 0.005. Other metals absent.

BACTERIOLOGICAL RESULTS.

Number of "Bacteria" growing on Agar per cc. or ml. in	}	1 day at 37°C.	2 days at 37°C.
		9	120
		3 days at 20°C.	

Presumptive Coliform Reaction.	* Present	100 c.c.	Absent	50 c.c.
Bact. coli.	Present	-	Absent	100 c.c.
Cl. welchii Reaction.	Present	-	Absent	-

\* Due to coliform bacteria of Aerogenes Type I.

The following particulars can only be regarded as approximate:-

The number of dwelling houses connected to the mains is 4,703 with a population of 14,100. The number of dwelling houses supplied by means of standpipes is 960 with a population of 2,880.

#### SEWAGE DISPOSAL.

Sewage Disposal Works are in operation at West Mersea, Wivenhoe, Tiptree, Dedham, and also a small roadside plant at Layer Breton, which deals only with waste water. East Donyland is also sewered, but here the sewage is pumped into the head of the main of the adjoining Borough of Colchester. This Authority has a few houses whose sewage drains back to the East Donyland pumping station before being returned to the head of the Colchester main. All the works have been kept in order to ensure efficient operation of the plants.

#### HOUSING.

The housing problem is acute in all three districts. There is some overcrowding, but as far as Lexden & Winstree is concerned inspections so far made do not reveal a great deal of overcrowding. There are, however, a number of unfit houses which will have to be dealt with as opportunity arises. In Lexden & Winstree the percentage will probably be high, but will not be known definitely until the housing survey now in progress has been completed. The size of the problem may be gauged when it is realised that one village alone would already have had 50 houses demolished had not the war intervened.

#### INFECTIOUS & CONTAGIOUS DISEASE.

Non-notifiable infectious disease has been sporadically present throughout the year. There were 103 cases of chickenpox in Lexden & Winstree, and 13 in West Mersea. There were 45 cases of Mumps recorded in the second half of the year, and of these 29 were reported from one village alone. Wivenhoe was fairly free from minor infection.

Infestation of premises and persons has not presented a great problem.

Of the notifiable diseases, the most prevalent was Measles, which affected all districts. The peak months of the outbreak, not only in the year under review but in the larger outbreak in 1943, were May and June. In each case there was a dramatic fall in notifications in July. Lexden & Winstree 245 - Wivenhoe 101 - West Mersea 65. Apart from 45 cases of Whooping Cough notified in Lexden & Winstree, the other infectious diseases cannot be considered to have been very prevalent.

The following table shows the actual cases of the various diseases notified in the three districts:-

Disease	Lexden & Winstree	Wivenhoe	West Mersea
Infective Hepatitis	16	2	
Pneumonia	22	2	
Measles	245	101	65
Scarlet Fever	18	1	1
Puerperal Pyrexia	1	1	
Cerebro-spinal Fever	1		
Dysentery	1		
Erysipelas		1	
Whooping Cough	45	11	1

The case of Cerebro-spinal Fever is the same one which was mentioned in my last report; the patient had two attacks during the year under review, the second of which was fatal.

The following table shows the number of cases of Tuberculosis notified and deaths occurring from this disease during 1945:-

	Lexden & Winstree	West Mersea	Wivenhoe
Pulmonary	18	1	6
Non-pulmonary	10	1	0
Deaths	4	0	0

#### MOSQUITOES.

Mosquitoes were again a nuisance in West Mersea Urban District and the South Eastern part of Lexden & Winstree Rural District. Efforts to limit the nuisance were made on the lines adopted in the previous year. Specimens of mosquitoes and larvae submitted to the British Mosquito Control Institute again failed to produce the *Culex Molestus*; the search for this particular mosquito is being continued.



